

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**Docket Number  
23085-08273

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on November 20, 2007Signature / Narinder Banait /Typed or printed  
nameNarinder S. Banait

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First Named Inventor

Avetik Harutyunyan

Art Unit

1762

Examiner

Kelly M. Stouffer

This request is being filed with a notice of appeal.

I am the

☐

applicant/inventor.

/ Narinder Banait /

Signature

☐

assignee of record of the entire interest.

See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.

Narinder S. Banait

Typed or printed name

☒

attorney or agent of record.

Registration number 43,482(650) 335-7818

Telephone number

☐

attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

November 20, 2007

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☒\*Total of 1 of 1 form is submitted.

**ATTACHMENT TO THE**  
**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Pre-appeal review is requested because the rejections of record are clearly improper and without any factual or legal basis. Applicant respectfully requests that the panel indicate claims 1-19 recite allowable subject matter.

**I. Status of the Claims**

Claims 1-19 are pending and stand rejected in this application. In a Response filed after to the Final Rejection, Applicants did not amend the claims. The Examiner mailed an Advisory Action on October 23, 2007 maintaining the rejections.

**II. Claim Rejection: Claims 1, 3-15, and 17-19**

Claims 1, 3-15, and 17-19 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,232,706 to Dai *et al.* (Dai) in view of U.S. Patent Application Publication 2002/0036452 to Muroyama *et al.* (Muroyama). The Examiner stated that Dai discloses use of metal oxides as catalysts but did not disclose the use of metalorganics as catalyst, but Muroyama disclosed metalorganic catalysts.

This rejection is clearly in error because the Maruyama references teaches away from the invention. An element of the independent claim 1 is oxidizing the metalorganic layer deposited on the unmasked portion of the substrate to form a growth catalyst on the substrate. In contrast, Muroyama clearly states that the oxides of the growth catalyst should be removed prior to using the catalyst.

Muroyama at paragraph 95 states: “In the production method according to the first, second or third aspect of the present invention (these production methods will be sometimes generally referred to as “the method of the present invention” hereinafter),....” Muroyama thus states that all three embodiments of the invention were being discussed in paragraph 95. Then, further in paragraph 95, Muroyama states that “it is preferred to remove a metal oxide (so-called natural oxide film) on the surface of each metal particle or on the surface of the metal thin layer or the organometallic compound thin layer.” Thus, Muroyama teaches removing the metal oxide in all embodiments of their invention.

Further, Muroyama discloses the use of nickel acetylacetonate as the metalorganic layer in Examples 11 and 12. In both Muroyama examples where the nickel acetylacetonate layer is used, the corresponding metal oxide is removed. Thus, at paragraphs 268 and 276, Muroyama states “after the organometallic compound thin layer is formed, the metal oxide (natural oxide film) on the surface of the organometallic compound thin layer may be also removed in the same manner as in [Step-720] in Example 7.” Thus, the Muroyama embodiment that is closest to the applicants’ claimed invention, the Examples show that the metal oxide is removed.

In the Advisory Action, the Examiner states that removal of the oxides is preferred but not required, and the combined teachings of the references would suggest replacing the metal oxide of Dai with the organometallic catalysts of Muroyama to improve selective growth. The reasoning is however refuted by the disclosure of Muroyama. Muroyama, at paragraph 95, states that the reason for removing the metal oxide is to provide for more reliable growth of the carbon film.

...for making more reliable the selective growth of the carbon film on the carbon film selective-growth region, after the metal particles are allowed to adhere onto, or the metal thin layer or the organometallic compound thin layer is formed on, the surface of the cathode electrode, it is preferred to remove a metal oxide (so-called natural oxide film)

on the surface of each metal particle or on the surface of the metal thin layer or the organometallic compound thin layer.

Muroyama then discloses the methods for removing the metal oxide, such as by the use of plasma reduction treatment or by washing with an acid or a base. Upon reading the disclosure of Muroyama, one of skill in the art would conclude that removing the metal oxide from the catalyst surface would provide for the selective growth of carbon film more reliably. Thus, Muroyama would motivate one of skill in the art to remove the metal oxide. Consequently, one would not substitute the metal oxide catalysts of Dai with the organometallic catalyst of Muroyama.

The rejection of claims 1, 3-15, and 17-19 cannot stand.

### **III. Claim Rejections: Claim 2**

Claim 2 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Dai and in view of Muroyama and U.S. Patent No. 5,863,601 to Kikuchi *et al.* (Kikuchi).

Claim 2 depends from claim 1 and thus contains all the elements of claim 1. The combination of Dai, Muroyama and Kikuchi does not disclose depositing a metalorganic layer on the substrate and oxidizing the portion of the metalorganic layer deposited on an unmasked portion of the substrate to form a growth catalyst on the substrate. Muroyama in fact discloses removing the oxide that may form when a metalorganic is used as a catalyst, and Kikuchi does not cure the deficiency of Muroyama.

The rejection of claim 2 cannot stand.

### **IV. Claim Rejections: Claim 16**

Claim 16 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Dai and in view of Muroyama and U.S. Patent No. 4,650,895 to Kadokura *et al.* (Kadokura).

Claim 16 depends from claim 1 and thus contains all the elements of claim 1. The combination of Dai, Muroyama and Kadokura does not disclose depositing a metalorganic layer on the substrate and oxidizing the portion of the metalorganic layer deposited on an unmasked portion of the substrate to form a growth catalyst on the substrate. Muroyama instead teaches removing the oxide that may form when using metalorganic as a catalyst.

The rejection of claim 16 cannot stand.

**V. Summary**

Based on the foregoing, Applicant respectfully submits that each of the pending rejections suffers from a clear deficiency in the prima facie case asserted in support of the rejection. Accordingly, Applicant requests that the rejections of claims 2-11 be withdrawn.

Respectfully submitted,  
Avetik Harutyunyan

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By: /Narinder Banait/

Narinder S. Banait, Reg. No.: 43,482  
Fenwick & West LLP  
Silicon Valley Center  
801 California Street  
Mountain View, CA 94041  
Tel.: (650) 335-7818  
Fax.: (650) 938-5200